
LABORATORY
OF THE
INLAND REVENUE DEPARTMENT
OTTAWA, CANADA.

BULLETIN No. 358

CASSIA

NOTES AND COMMENTS.

Under this heading, as occasion arises, the Bulletins issued by this Department will contain, as an appendix, such comment as may seem necessary or advisable upon matters relating to the work of the Department in connection with the administration of the Adulteration Act, the Fertilizers Act, the Feeding Stuffs Act or the Proprietary Medicines Act.

It frequently happens that correspondents ask information regarding the above Acts, of such a nature that the matter in question possesses general interest, and comment upon it would prove acceptable and useful to others than the immediate questioner. If the reply may find a place in these columns. For convenience of reference the notes will be numbered in series.

A. MCGILL,
Chief Analyst.

LABORATORY
OF THE
INLAND REVENUE DEPARTMENT
OTTAWA, CANADA.

BULLETIN No. 358

CASSIA

OTTAWA, December 6, 1916.

J. U. VINCENT, Esq.,
Deputy Minister of Inland Revenue,

SIR,—I beg to hand you a report upon 143 samples purchased throughout Canada by our inspectors, as Cassia.

This spice, which finds extensive sale in Canada, has never been legally defined in such a way as to fix limiting values, and to enable us to declare its genuineness or otherwise.

Cassia closely resembles the spice known as Cinnamon, and indeed may be regarded as indistinguishable from the latter, so far as retail spice trade is concerned.

Cinnamon and Cassia are the dry barks of trees which belong to the same botanic genus, *Cinnamomum*. Cinnamon is the bark of *C. Zeylanicum*, chiefly grown in Ceylon and the East Indies; Cassia is the bark of *C. Cassia*, chiefly grown in China and India. The former bark is thinner, lighter in colour and exists (commercially) in smaller rolls than Cassia bark. It is sufficiently easy to distinguish the two articles, in the unground state; and there is a considerable difference in price between whole cinnamon and whole cassia. The botanical elements of the two are, however, practically identical; and, in the finely ground state, it becomes a difficult, if not an impossible thing, to discriminate between them. The darker colour of Cassia is almost the only distinctive character that remains.

Whether cassia is inferior to cinnamon for flavouring purposes, in cookery, is an open question. The general impression is that cinnamon is preferable. Its higher price is doubtless due to this preference. At the same time it is certain that much, if not most, of the ground cinnamon of commerce, is really ground cassia.

Several grinders distinctly label their goods with the word Cassia; and it is probable that the same spicemen put on the market a higher priced article under the name Cinnamon; but of this I have no conclusive proof. It is however quite certain that the spice in question is known to most domestic users as Cinnamon; while the term Cassia conveys a very vague meaning, or no meaning whatever. Throughout Quebec the article is known as Canelle, which means cinnamon as distinguished from cassia, to which belongs the term Casse, seldom mentioned except as a drug.

From an interesting paper on the subject, by H. E. Sindall, Chemist to the Meikel and Smith Spice Co. of Philadelphia (*Journal Industrial and Engineering Chemistry*, 1912, 590) it appears that the classification of the article as Cinnamon or Cassia in commerce depends as much upon its source as upon its chemical or physical properties.

The British Pharmacopoeia defines Cinnamon bark (*Cinnamomi cortex*) which is required to be free from cork or woody tissue, and to contain not more than 5 per cent ash; but Cassia is not defined by the pharmacopoeias.

So far as our experience goes, true Cinnamon, in the restricted sense, is but little if at all employed as a spice, in the ground condition.

Under these circumstances, it will be seen that a discrimination between cinnamon and cassia, as spices, is difficult to maintain. It is open to question how far we may take the darker colour of cassia, as evidence of its presence.

The difficulty of distinguishing between cinnamon and cassia, in the ground state, is recognized by the Committee of Standards at Washington, as shown by the following definitions proclaimed as legal for the United States in June, 1906.

Cinnamon is the dried bark of any species of the genus *Cinnamomum*, from which the outer layers may or may not have been removed.

True Cinnamon is the dried inner bark of *Cinnamomum Zeylanicum*, Breyn.

Cassia, is the dried bark of various species of *Cinnamomum*, other than *Cinnamomum Zeylanicum*, from which the outer layers may or may not have been removed.

Cassia buds are the dried, immature fruit of species of *Cinnamomum*.

Ground Cinnamon, Ground Cassia, is a powder consisting of Cinnamon, Cassia or Cassia buds, or a mixture of these species and contains not more than six (6) per cent of total ash, and not more than two (2) per cent of sand.

It will be noted that ground Cinnamon and ground Cassia are virtually recognized as identical; and this is in accord with actual experience.

The flavour of true cinnamon is usually understood to be somewhat more delicate than that of Cassia; but on careful examination of the matter I am of opinion that the distinction has no value for purposes of a definition.

According to accessible literature, the article shipped as Cassia from China, Ceylon, Batavia and other sources, varies greatly in cleanliness; and it would seem that determination of the ash furnishes the most valuable datum in this regard. The total ash in a large number of samples reported by Sindall (*Journal Industrial and Eng. Chemistry* 1912, 590), representing extensive importations for the years 1906 to 1911, varied from about 3 per cent to about 13 per cent. The last quoted figure is however quite exceptional, and very few samples exceeded 7 per cent.

Six per cent appears to be a very reasonable maximum figure for a good article; and I have noted "ash excessive" in samples now reported, wherever the total ash exceeds 6 per cent or the insoluble ash (sand) exceeds 2 per cent.

Twenty two (22) samples show ash in excess of the suggested standard.

I beg to recommend publication of this report as Bulletin No. 358.

I have the honour to be, Sir,

Your obedient servant,

A. MCGILL,
Chief Analyst.

BULLETIN No 358 —

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1915.							
Dec. 29	Cassia....	60808	A. J. Roop, New Glasgow..	1 lb..	40	Gorman, Eckert Co., London.	Mrs
" 29	"	60860	S. M. Lockhart & Co., New Glasgow.	1 " ..	30	" ..	"
" 29	"	60861	James Cavanagh, New Glasgow.	1 " ..	30	Todhunter, Mitchell & Co., Toronto.	"
" 30	"	60809	C. A. Fraser & Co., Stellarton.	1 " ..	30	G. E. Barbour Co., St. John.	"

DISTRICT OF PRINCE EDWARD ISLAND—

Dec. 14	Cassia....	60445	Coffin & Co., Charlottetown.	1 lb..	30	G. E. Barbour Co., St. John.	.....
" 17	"	60446	Beer & Goff, Charlottetown.	1 " ..	30	W. H. Schwartz & Son, Halifax.	.....
" 17	"	60447	W. W. Walker, Charlottetown.	1 " ..	30	The Lister Pure Food Co., Toronto.	.....
" 17	"	60448	J. G. Passmore, Charlottetown.	1 " ..	30	.....	J. A. Farquharson, Charlottetown.

DISTRICT OF NEW BRUNSWICK—

Dec. 12	Cassia....	60263	W. A. Simonds, St. John ..	3 pkt.	30	Pure Gold Mfg. Co., Toronto.	.....
" 12	"	60264	Dearborn & Co., Ltd., St. John.	3 " ..	25	Vendors ..	.....
" 23	"	60265	Baird & Peters, St. John...	3 " ..	17	Dearborn & Co., St. John.	.....
" 23	"	60266	Puddington, Wetmore & Morrison, St. John.	3 " ..	15	Vendors ..	.....
" 23	"	60267	McCready & Sons, Ltd., St. John.	3 " ..	30	" ..	.....
" 29	"	60268	G. E. Barbour Co., Ltd., St. John.	3 " ..	15	" ..	.....
1916.							
Feb. 9	"	60269	Reed & Co., Ltd., Moncton.	3 " ..	30	S. H. Ewing & Sons, Montreal.	.....
" 9	"	60270	Sanitary Grocery Co., Moncton.	3 " ..	30	John P. Mott & Co., Halifax.	.....

DISTRICT OF NOVA SCOTIA—

Feb. 18	Cassia....	64341	National Drug Co., Halifax.	1 lb..	23	Vendors.....	.....
" 18	"	64342	John P. Mott & Co., Halifax.	1 " ..	23	" ..	.....
" 21	"	64343	Corkum & Ritcey, Ltd., Halifax.	1 " ..	21	Dearborn & Co., St. John.	Mrs
" 21	"	64344	J. L. Wilson & Co., Halifax.	1 " ..	30	W. H. Schwartz & Son, Halifax.	"
" 23	"	64345	Wentzell's, Ltd., Halifax..	1 " ..	24	White Swan Spice Co., Toronto.	"

CASSIA.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Ash.		Microscopical Examination.		
	Total.	Insol- uble.			

W. A. PETIPAS, TEMPORARY INSPECTOR.

	p. c.	p. c.		
.....	3.30	0.10	Some outer bark tissues	60850
.....	3.80	0.10	" "	60860
.....	1.50	0.05	No foreign tissues	60861
.....	5.77	0.80	"	60862

WM. A. WEEKS, INSPECTOR.

	p. c.	p. c.		
.....	3.30	0.50	No foreign tissues	60445
.....	1.52	0.10	"	60446
.....	3.97	1.05	"	60447
.....	3.90	1.00	Some outer bark tissues	60448

JOHN C. FERGUSON, INSPECTOR.

	p. c.	p. c.			
.....	3.30	0.90	No foreign tissues	60365	
.....	6.45	3.60	" Insoluble ash too high.	60364	Ash excessive.
.....	1.82	0.07	"	60362	
.....	6.93	3.77	Excess woody tissue. Considerable sand.	60369	Ash excessive.
.....	3.10	0.05	Some outer bark tissues	60367	
.....	7.50	4.10	No foreign tissues. Ash high	60368	Ash excessive.
.....	6.40	3.45	" Insol. ash slightly high.	60366	"
.....	6.50	3.30	" "	60370	"

R. J. WAUGH, INSPECTOR.

	p. c.	p. c.		
.....	2.25	0.00	Some outer bark tissues	64341
.....	2.40	0.25	No foreign tissues	64342
.....	1.80	0.05	"	64343
.....	1.85	0.00	"	64344
.....	3.90	1.25	"	64345

BULLETIN No. 358—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Ccs.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC CITY—

1915.							
Dec. 20	Cannelle Moulu.	56624	J. B. Lapointe, 57 St. Ambroise, Quebec.	1 lb.	30	Unknown.	Turcotte Frère.
" 20	"	56625	M. Côté, 79 St. Ambroise, Quebec.	1 "	30	"	Unknown.
" 20	"	56626	E. Delisle, 2 Ave. Taschereau, Quebec.	1 "	30	"	"
" 20	"	56628	M. Tremblay, 8 St. Agnes, Quebec.	1 "	30	"	Turcotte Frère.
" 20	"	56629	Labbe Lamontagne, 46 Ave. Taschereau, Quebec.	1 "	30	"	Unknown.
" 20	"	56630	Mme. V. Pierre Darte, 139 Ave. Renaud, Quebec.	1 "	30	"	J. B. Renaud Cie.
" 20	"	56631	George Trudel, 69 Ave. Bigaouette, Quebec.	1 "	30	"	J. B. Letellier.
" 23	"	56642	Arthur Thivierge, 368 St. Joseph, Quebec.	1 "	30	"	Unknown.

DISTRICT OF QUEBEC PROVINCE—J. E. AUDET, O. BROCHU

Dec. 13	Cannelle...	3642	J. E. Fortier, St. Henri...	1 lb.	30	N. Turcotte & Cie, Quebec.	
" 21	"	3658	O. Fradette, St. Narcisse...	1 "	30	Quebec Preserving Co., Quebec.	
" 24	"	3668	S. Fontaine, St. Isidore...	1 "	35	Carrier & Fils, Levis.	
" 13	Cannelle moulu.	4432	Joseph Langlois, Armagh...	1 "	24	Dalton Bros., Toronto.	
" 13	"	4434	Cleophas Beaudoin, Armagh...	1 "	24	A. B. Dupuis...	
" 22	"	4447	George Roy, St. Michel...	1 1/2 "	60	Turcotte Frère...	
" 24	Cinnamon.	4460	Arthur Fradette, Armagh...	3 pkg.	30	N. Turcotte & Cie, Quebec.	
" 24	Cannelle pure.	4465	Adelard Brochu, "	1 lb.	30	Turcotte Frère...	
" 23	Cannelle...	72206	Dame P. Richard, Berthier...	1 "	27	Unknown...	
" 28	"	72222	Pierre Morin, Cap St. Ignace...	1 "	34	Carrier & Fils, Levis.	
" 28	"	72224	Jos. Dubé, "	1 "	30	Turcotte Frère, Quebec.	
" 29	"	72229	J. B. Poirier, St. Thomas...	1 "	30	N. Rioux & Cie, Quebec.	
" 22	"	4900	Jos. O. Aubu, Bic...	1 1/2 "	53	Unknown...	
" 22	"	4918	P. E. Danjous & Fils, Bic...	1 "	30	J. V. Boudrais, Montreal.	

CASSIA.

Inspector's Report. (Is not an expression of opinion.	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Ash.		Microscopical Examination.		
	Total.	Insol- uble.			

F. X. W. E. BELAND, INSPECTOR.

	p. c.	p. c.			
.....	8.02	3.88	No foreign tissues.....	56624	Ash excessive.
.....	3.80	0.76	Considerable foreign tissues.....	56625	
.....	6.24	0.35	" "	56626	Ash excessive.
.....	7.87	3.73	No foreign tissues	56628	"
.....	2.99	0.67	" "	56629	
.....	4.33	2.0	" "	56630	
.....	Ground	Cloves.	.....	56631	
.....	5.28	1.59	No foreign tissues.....	56642	

T. GENDREAU, A. PELLETIER AND N. CADIEUX, TEMPORARY INSPECTORS.

.....	4.30	1.60	Some outer bark tissues.....	3642	
.....	1.60	0.10	No foreign tissues.....	3658	
.....	2.40	0.35	" "	3668	
.....	4.86	1.58	" "	4432	
.....	5.75	0.43	" "	4434	
.....	8.17	3.77	" "	4447	Ash excessive.
.....	2.87	0.49	" "	4460	
.....	8.10	3.58	" "	4465	Ash excessive.
.....	4.83	1.62	" "	72206	
.....	4.50	1.49	" "	72222	
.....	8.00	3.89	" "	72224	Ash excessive.
.....	2.44	0.08	" "	72229	
.....	4.15	1.27	Some outer bark tissues.....	4909	
.....	3.40	0.85	No foreign tissues. Marked cinnamon.	4918	

BULLETIN No. 358—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF QUEBEC PROVINCE—

1915.							
Dec. 23	Cannelle..	4923	Gagnon & Belisle, St. Fabien.	3 pkt.	30	.....	Gagnon & Gar- ent, Quebec.
" 23	"	4928	Pelletier & Belanger, St. Fabien.	1 lb.	30	.....	N. Rioux, Que- bec.
" 16	Cannelle Moulin.	340	Tancrede Lapointe, St. Jerome.	1 "	30	Hudon Hebert, Mon- treal.	.....
" 26	"	302	Mde. F. D. Hall, St. Agathe des Mont.	1 "	30	Birks Corner Co., Montreal.	.....
1916.							
Jan. 7	"	374	M. A. Geroux, St. Augustin, Deux Montagnes.	1 "	30	.....	Hudon & Orsali.
" 7	"	375	Belair & Paquette, St. Eustache, Deux Montagnes.	1 "	30	.....	Lapoint & Mar- tin.

DISTRICT OF THREE RIVERS—

1915.							
Dec. 13	Cassia...	69186	Wm. Perrault, Joliette....	1 lb.	38	.....	Magnan Chev- alier, Joliette.
" 16	"	69196	J. P. A. Boucher, St. Damien.	1 "	21	.....	Chevalier Poul- iot, Joliette.
" 17	"	69201	Arcade Brault, St. Melanie	1 "	30	.....	Magnan Chev- alier, Joliette.
" 18	Cannelle...	69205	E. Laurion, L'Epiphanie...	1 1/2 "	68	.....	Lacaille Gend- rault, Montreal

DISTRICT OF EASTERN TOWNSHIPS—

1916.							
Feb. 1	Cassia....	67514	Adelard Roy, Sherbrooke..	3 pkts.	30	F. F. Dalley Co. ....	.....
" 1	"	67515	U. Brien, Sherbrooke	1 lb.	30	.....	.....
" 1	"	67516	Joseph Landry.....	1 "	30	Nat. Coffee & Spice Co.	.....
" 1	"	67517	A. E. Beaudoin, Sherbrooke	3 pkts.	45	.....	.....
" 1	"	67518	J. R. Robert, Sherbrooke..	1 lb.	30	.....	.....
" 1	"	67519	J. Audet, Coaticook.....	1 "	30	.....	Hudon Hebert Cia, Ltd.
" 1	"	67520	L. S. Durand, Coaticook..	3 pkts.	30	S. H. & A. S. Ewing, Montreal.	.....
" 3	"	67521	W. W. Emery, Sherbrooke.	3 "	30	.....	Deneault, G. & P. Co., Sher- brooke.

CASSIA.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.			No. of Sample	Remarks and Opinion of the Chief Analyst.

	Ash.		Microscopical Examination.		
	Total.	Insol- uble.			

Concluded.

	p. c.	p. c.			
.....	3.50	1.25	No foreign tissues.....	4923	
.....	1.00	0.10	" ".....	4926	
.....	6.26	0.43	Considerable foreign tissues.....	340	Ash excessive.
.....	6.42	0.85	A little foreign tissues.....	362	"
.....	3.28	0.86	No foreign tissues.....	374	
.....	5.80	0.80	" ".....	375	

DR. V. P. LAVALLEE, INSPECTOR.

.....	5.17	1.53	No foreign tissues.....	69186	
.....	4.45	1.03	" ".....	69196	
.....	6.86	2.95	" ".....	69301	Ash excessive.
.....	3.45	0.47	Considerable foreign tissues.....	69305	

J. J. COSTIGAN, ACTING INSPECTOR.

.....	4.56	1.07	No foreign tissues.....	67514	
.....	5.98	1.66	" ".....	67515	
.....	3.26	0.85	" ".....	67516	
Key Brand.	5.43	1.66	" ".....	67517	
.....	5.11	1.56	" ".....	67518	
.....	5.38	0.40	Considerable foreign tissues.....	67519	
.....	10.57	6.81	No foreign tissues.....	67520	Ash excessive.
.....	7.20	2.20	" ".....	67521	"

BULLETIN No. 358—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MONTREAL—

1916.							
Feb.	8	Cassia ...	67261 D. Hadden, 1 Rushbrooke St., Montreal.	6pkgs.	30	.....	Herron & Le Blanc.
"	8	"	67262 P. Blais, 288 Liverpool St., Montreal.	1 lb.	30	.....	J. V. Boudrias.
"	9	"	67263 A. O. Galarneau, 624 Wellington St., Montreal.	1/2 "	30	.....	Herron & Le Blanc.
"	9	"	67264 D. McGillvray, 308 Charron St., Montreal.	1/2 "	30	.....	J. V. Boudrias.
"	9	"	67265 T. K. Stone, 637 Wellington St., Montreal.	1/2 "	30	.....	Herron & Le Blanc.
"	10	"	67266 A. Beaulieu, 33 Faward St., Montreal.	1/2 "	33	.....	" "
"	19	"	67267 Edward Upton, 358 Bourgeois St., Montreal.	1/2 "	30	.....	Hudon, Hebert.
"	10	"	67268 W. J. Roberts, 949 Wellington St., Verdun.	1/2 "	23	.....	Wm. Galbraith.

DISTRICT OF VALLEYFIELD—

Jan.	4	Cassia....	62953 J. E. Leduc, Alexandria.	1/2 "	30	.....	Hudon, Hebert Co., Ltd., Montreal.
"	4	"	62954 Joseph Sabourin, Alexandria.	1/2 "	30	Dalton Bros., Toronto.	.....
"	12	"	62955 A. R. Bison, Valleyfield.	1/2 "	30	.....	.....
"	15	"	62956 D. Seward, Hawkesbury.	1/2 "	24	F. J. Castle Co.	.....
"	20	"	62957 W. J. Martin, Buckingham.	1/2 "	30	Pure Gold Co., Ltd.	.....
"	20	"	62958 Tourangeau & Champagne, Buckingham.	1/2 "	30	.....	.....
"	26	"	62959 A. Brien, Chambly Basin.	3pkts.	30	Litster Pure Food Co.	.....
"	26	"	62960 Joseph Pelletier, Chambly Basin.	1/2 "	30	.....	.....

DISTRICT OF OTTAWA—

1915.							
Dec.	7	Ground Cassia.	70552 A. M. Parkinson, Kemptville.	1/2 lb.	30	Dalton Bros., Toronto.	.....
"	8	"	70553 Wm. Jenkins, Carleton Place.	1/2 "	30	Unknown.	.....
"	11	"	70573 C. S. Colquhoun, Morrisburg.	1/2 "	25	"	.....
"	14	"	70582 A. E. Thoma, Arnprior.	1/2 "	30	Dalton Bros., Toronto.	Forbes & Co., Arnprior.

CASSIA.

Inspector's Report. (Is not an expression of opinion.	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Ash.		Microscopical Examination.		
	Total.	Insol- uble.			

D. J. KEARNEY, INSPECTOR.

	p.c.	p.c.			
.....	6.12	0.67	Considerable foreign tissues.....	67261	Ash excessive.
.....	3.64	0.81	No foreign tissues.....	67262	
.....	5.94	0.36	Considerable foreign tissues.....	67263	
.....	3.58	0.85	No foreign tissues.....	67264	
.....	5.67	0.53	" ".....	67265	Ash excessive.
.....	6.06	0.44	Considerable foreign tissues.....	67266	Ash excessive.
.....	6.01	0.44	" ".....	67267	
.....	5.82	0.48	" ".....	67268	

J. J. COSTIGAN, ACTING INSPECTOR.

	p.c.	p.c.			
.....	5.94	0.23	Considerable foreign tissues.....	63953	
.....	5.40	2.21	No foreign tissue.....	63954	
.....	5.48	1.06	" ".....	63955	
.....	3.13	0.07	" ".....	63956	
.....	2.58	0.15	" ".....	63957	
.....	2.09	0.11	" ".....	63958	
.....	6.66	1.91	" ".....	63959	Ash excessive.
.....	4.48	0.27	" ".....	63960	

J. A. RICKEY, INSPECTOR.

	p.c.	p.c.			
.....	3.13	0.54	No foreign tissues.....	70552	
.....	3.47	0.26	" ".....	70553	
.....	4.30	0.55	" ".....	70554	
.....	3.15	0.55	" ".....	70555	

BULLETIN No. 358—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF OTTAWA—

1915.							
Dec. 14	Ground Cassia	70560	T. McCormick & Son, Arnprior.	2 lbs.	30	.....	Forbes Bros., Arnprior.
" 24	"	70639	E. Birnba, Eganville.....	2 "	30	J. M. Lowes Co., Toronto.	.....
" 27	"	70632	W. McCreery, 42 Creighton St., Ottawa.	2 "	30	.....	Provost & Allard Ottawa.
" 28	"	70637	Henri Daoust, Alfred.....	2 "	30	.....	Hudon-Hebert & Cie.

DISTRICT OF KINGSTON—

Dec. 9	Cassia...	71763	A. Glover, Kingston.....	2 lbs.	30	F. F. Dalley Co., Hamilton.	.....
" 9	"	71764	J. E. Purday, Kingston...	2 "	30	McLaren's, Hamilton.	.....
" 9	"	71765	J. Gilbert, Kingston...	2 "	35	J. M. Lowes, Toronto.	.....
" 9	"	71766	W. J. Lee, Kingston.....	2 "	30	.....	W. G. Craig Co., Kingston.
" 9	"	71767	W. J. Arniel, Kingston....	2 "	30	F. F. Dalley Co., Hamilton.	.....
" 10	"	71768	A. Smith, Kingston...	2 "	30	W. G. Dunn Co., Hamilton.	.....
" 15	"	71769	J. E. Lillioo, Peterboro ..	2 "	45	.....	.....
" 15	"	71770	A. Pearson, Peterboro.....	2 "	30	T. Kinnear Co., Peterboro.	.....

DISTRICT OF TORONTO—

Dec. 20	Ground Cassia	69990	B. Chyston, 388 Wilton Ave., Toronto.	2 lbs.	25	Lister Pure Food Co., Toronto.	.....
" 23	"	69991	M. Dougall, 870 Broadview Ave., Toronto.	2 "	30	.....	Eby Blain, Ltd., Toronto.
" 23	"	69992	A. C. Penney, 195 Danforth Ave., Toronto.	2 "	30	.....	" "
" 23	"	69993	A. E. Ryan, 759 Pape Ave., Toronto.	2 "	30	.....	Armstrong & Paford, Toronto.
" 24	"	69995	C. Godfrey, 371 Spadina Ave., Toronto.	2 "	30	.....	Unknown.....
" 27	"	69996	J. A. Newman, 456 Gerrard St., Toronto.	2 "	30	R. B. Hayhoe & Co., Toronto.	.....
" 27	"	69997	John Anderson, 96 Dundas St., Toronto.	2 "	25	.....	John Sloan & Co., Toronto.
" 27	"	70162	C. J. Ballard, 2 Westmoreland Ave., Toronto.	2 "	25	T. D. Hunter Mitchell, Toronto.	.....

CASSIA.

Inspector's Report. (Is not an expression of opinion.	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Ash.		Microscopical Examinations.		
	Total.	Insol- uble.			

Concluded.

	p. c.	p. c.			
.....	3.13	0.70	No foreign tissues.....	70690	
.....	3.90	0.08	" "	70639	
.....	3.05	0.70	" "	70632	
.....	6.96	1.26	A little foreign tissue.....	70637	Ash excessive

JAMES HOGAN, INSPECTOR.

.....	3.73	0.53	No foreign tissue.....	71763	
.....	4.05	0.12	" "	71764	
.....	3.17	0.31	" "	71765	
.....	2.56	0.34	" "	71766	
.....	4.95	1.16	" "	71767	
.....	4.96	1.22	" "	71768	
.....	2.64	0.18	" "	71769	
.....	4.32	0.70	" "	71770	

H. J. DAGER, INSPECTOR.

.....	6.63	2.00	No foreign tissues.....	60000	Ash excessive.
.....	2.91	0.45	" "	60001	
.....	3.80	0.15	" "	60002	
.....	2.49	0.22	" "	60003	
.....	8.50	0.22	" "	60005	
.....	4.33	1.21	" "	60006	
.....	3.06	0.15	" "	60007	
.....	3.30	0.19	" "	70103	

BULLETIN No. 358—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF WINDSOR—

1916.							
Jan. 11	Cassia ...	54529	J. P. Sheppard, Clinton ...	1 lb.	36	Gorman, Eckert Co., London.	
" 11	" ...	54534	Johnson & Co., Clinton ...	"	40		John Sloan, Berlin.
" 12	" ...	54541	J. J. McEwen, Goderich ...	"	30	F. F. Dalley Co., Hamilton.	
" 12	" ...	54545	John Spahi, Goderich ...	"	30	Gorman, Eckert Co., London.	
" 12	" ...	54546	Jas. H. Pipe, Goderich ...	"	60	" "	
" 12	" ...	54550	W. J. Powell, Goderich ...	"	40	" "	
" 13	" ...	54558	G. H. Haig, Seaforth ...	"	18	Dalley's, Hamilton.	
" 13	" ...	54559	Cardno Bros., Seaforth ...	"	30	Gorman, Eckert Co., London.	

DISTRICT OF MANITOBA—

1915.							
Dec. 20	Cassia ...	71969	Whitman & Co., Emerson ...	1 lb.	30	Codville Co., Winnipeg.	
" 22	" ...	71970	A. F. Higgins, Carman ...	"	26	A. McDonald, Ltd., Winnipeg.	
" 22	" ...	71971	Miller Bros., Carman ...	"	30	Richards & Brown, Carman.	
1916.							
Jan. 4	" ...	71972	W. N. White, Souris ...	"	30	Richards & Brown, Winnipeg.	
" 6	" ...	71973	J. F. Price, Brandon ...	"	30	Codville Co., Winnipeg.	
" 7	" ...	71974	Murdoch & Wilson, Virden ...	"	30	Gold Standard Co., Codville.	
" 7	" ...	71975	Scales & Carscadden, Virden ...	"	30	Unknown ...	
" 7	" ...	71976	N. R. Shurman, Virden ...	"	30	F. F. Dalley, Hamilton.	

DISTRICT OF SASKATCHEWAN—

1915.							
Dec. 14	Cassia ...	71503	T. A. Eason, Avonlea ...	3 pks.	30	Gold Standard Co., Winnipeg.	Codville Co., Moose Jaw.
" 14	" ...	71505	M. Devlin, Avonlea ...	"	30	Gorman, Eckert Co., Winnipeg.	McDonald, Crawford Co., Moose Jaw.
" 16	" ...	71515	Hector Hay, Yellow Grass ...	"	30	Campbell Bros. & Wilson, Winnipeg.	
" 16	" ...	71516	J. C. Baker, Yellow Grass ...	"	30	No Vary Products Co., Minneapolis.	Weyburn Grocery, Weyburn

CASSIA.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Ash.		Microscopical Examination.		
	Total.	Insol- uble.			

JOHN TALBOT, INSPECTOR.

	p.c.	p.c.		
.....	2.95	0.45	No foreign tissues.	54529
.....	3.45	0.22	" "	54534
.....	4.88	1.39	" "	54541
.....	3.64	0.57	" "	54545
.....	4.99	0.88	" "	54546
.....	3.04	0.46	" "	54550
.....	4.97	1.27	" "	54558
.....	2.99	0.47	" "	54559

J. B. COSGROVE, TEMPORARY INSPECTOR.

.....	3.48	0.73	No foreign tissues.	71969
.....	4.52	0.78	" "	71970
.....	2.82	0.40	" "	71971
.....	2.83	0.44	" "	71972
.....	3.25	0.62	" "	71973
.....	3.46	0.70	" "	71974
.....	4.94	1.09	" "	71975
.....	4.48	1.30	" "	71976

L. H. HALL, TEMPORARY INSPECTOR.

.....	3.80	0.92	No foreign tissues.	71503
.....	3.30	0.90	" "	71506
.....	4.40	0.98	" "	71515
.....	2.96	0.72	" "	71516

BULLETIN No. 358—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF ALBERTA—

1916.							
Feb. 10	Cassia....	52353	J. H. Morris & Co., Edmonton.	½ lb.	30	White Star Mfg. Co., Winnipeg.	
" 10	"	52354	J. A. Hallier, Edmonton....	½ "	30	Georgeson & Co., Calgary.	
" 11	"	52355	Johnstone Walker, Ltd., Edmonton.	½ "	37	Reville Wholesale Ltd., Edmonton.	
" 11	"	52356	Hudson's Bay Co., Edmonton.	½ "	30	" "	
" 16	"	52357	L. J. Adams, Stettler.	½ "	30	Pure Gold Mfg. Co., Winnipeg.	
" 21	"	52358	S. G. Freeze, Calgary.....	½ "	30	Campbell, Wilson & Horne, Calgary.	
" 22	"	52359	Hudson's Bay Co., Calgary.	3 tins.	30	Georgeson & Co., Calgary.	
" 22	"	52360	John Irwin & Co., Ltd., Calgary.	3 "	30	" "	

DISTRICT OF ROCKY MOUNTAINS—

1915.							
Dec. 14	Cassia....	68121	Union Cash Grocery, Nelson.	3 tins.	40	Gorman Eokert & Co., London.	
1916.							
Jan. 7	"	68145	J. Manning, Cranbrook ...	½ lb.	30	W. H. Malkin & Co., Vancouver.	
" 7	"	68150	Ira R. Manning, Canbrook.	3 tins.	40	F. F. Dalley Co., Hamilton.	
" 7	"	68155	Little & Atchison, Cranbrook	3 "	40	Georgeson & Co., Calgary.	

DISTRICT OF VANCOUVER—

Jan. 14	Ground Cassia.	55450	David Spencer, Ltd., Vancouver.	3 tins.	30	.....	
" 15	"	55451	C. O. Stores, 106 Hastings St. W., Vancouver.	3 "	30	Empress Mfg. Co., Vancouver.	
" 18	"	55452	Central Market, 32 Hastings St. E., Vancouver.	3 "	30	W. H. Malkin & Co., Vancouver.	
" 18	"	55453	J. McTaggart & Sons, 794 Granville St., Vancouver.	½ lb.	30	Unknown	
" 18	"	55454	Slater's Market, 830 Granville St., Vancouver.	3 tins.	30	Kelly, Douglas & Co., Vancouver.	
" 18	"	55455	A. & C. Grocery, 530 Granville St., Vancouver.	½ lb.	30	Empress Mfg. Co., Vancouver.	
" 19	"	55456	D. McGregor, 1201 Pender St. W., Vancouver.	3 tins.	30	Wm. Braid & Co., Vancouver.	
" 19	"	55457	Duke's Grocery, Hastings St. and Gore Ave., Vancouver.	½ lb.	30	Unknown	

CASSIA.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture at 110°C.	Ash.		Microscopical Examination.	Volatile Ether Extract 110°C.	Non-volatile Ether Ex- tract 110°C.	Total Sol- uble Ether Extract.	Crude Fibre.		
		Total.	Insol- uble.							

A. W. MARKLEY, INSPECTOR.

	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.	
.....	12.0	3.10	0.60	No foreign tissues.	0.165	0.177	0.342	24.40	52353
Tuxedo Brand.....	11.25	3.45	0.60	" ..	0.210	0.186	0.306	25.00	52354
.....	11.30	3.85	0.90	" ..	0.164	0.190	0.354	26.70	52355
Nolliver Brand.....	10.64	2.85	0.40	" ..	0.231	0.182	0.413	24.70	52356
.....	10.24	3.45	0.80	" ..	0.191	0.157	0.348	23.50	52357
.....	11.68	3.30	0.80	" ..	0.182	0.172	0.354	24.70	52358
Tuxedo Brand ..	10.68	2.95	0.40	" ..	0.232	0.193	0.425	24.70	52359
" ..	10.12	3.10	0.35	" ..	0.233	0.180	0.422	23.55	52360

THOS. PARKER, INSPECTOR.

.....	11.77	2.45	0.40	No foreign tissues.	0.238	0.160	0.407	20.70	68121
.....	11.77	2.06	0.15	" ..	0.218	0.128	0.346	19.55	68146
.....	10.62	4.95	1.15	" ..	0.206	0.145	0.353	20.90	68150
.....	11.34	3.35	0.55	" ..	0.221	0.180	0.401	23.05	68155

E. J. MORGAN, INSPECTOR.

Packed expressly for Vendor.	11.46	3.30	0.15	No foreign tissues.	0.244	0.118	0.362	19.90	55450
Sold as Cinnamon...	11.31	4.15	0.10	" ..	0.279	0.105	0.384	17.30	55451
Malkin's Best. Sold as Cinnamon.	11.30	2.30	0.10	" ..	0.224	0.147	0.371	23.50	55452
" " ..	10.56	2.65	0.20	" ..	0.254	0.127	0.381	17.40	55453
Nabob Brand. Sold as Cinnamon.	10.56	2.45	0.15	" ..	0.294	0.140	0.434	16.45	55454
" " ..	11.07	3.50	0.10	" ..	0.263	0.106	0.368	15.60	55455
" " ..	11.29	3.50	0.20	" ..	2.291	0.168	0.459	18.66	55456
Braid's Best Brand Sold as Cinnamon.	11.39	3.70	0.60	" ..	0.156	0.129	0.285	19.85	55457

BULLETIN No. 358—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VICTORIA—

1916.							
Mar. 13	Cassia....	71333	W. A. Jameson Coffee Co., 754 Broughton St., Victoria.	2 lb..	20	G. S. Dunn & Co., Hamilton.	.....
" 15	"	71335	Pioneer Coffee & Spice Mills, 641 Pembroke St., Victoria.	2 "	25	G. Growther & Co., Kobe, Japan.	.....

CASSIA.

Inspector's Report. (Is not an expression of opinion.)	Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture at 110°C.	Ash.		Microscopical Examination.	Volatile Ether Extract 110°C.	Non-volatile Ether Ex- tract 110°C.	Total Sol- phuric Ether Extract.	Crude Fibre.		
		Total.	Insol- uble.							

D. O'SULLIVAN, INSPECTOR.

	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.	
.....	11.37	2.00	0.60	No foreign tissues.	0.200	0.190	0.200	23.0	71383
.....	10.47	3.75	1.10	" ..	0.208	0.190	0.463	18.25	71385